

DAS
9
9-89

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 135202

Tuesday, August 04, 2015 11:12:25 AM

135202

Page 2

Item ID: 647.7601 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Lower Deflector Assembly
 Start Date: 8/04/15 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 8/14/15 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: <i>cc k050</i>	0.00				<i>(4)</i>	<i>JA</i>	<i>AUG 21 2015</i>	
140									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
150	QC21- Final Inspection - Work Order Release	0.00						<i>AUG 21 2015</i>	
150									
QC	Memo	0.01						<i>AUG 21 2015</i>	
Quality Control									

mlj *15-08-21*

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, August 04, 2015 11:12:30 AM

Page 1

Work Order ID: 135202

135202

Parent Item: 647.7601

647 7601

Parent Item Name: Lower Deflector Assembly

Start Date: 8/04/15

Required Date: 8/14/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 15-08-04 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.7611 *647 7611* Lower Deflector		Manufactured	No				Each	0.0000		4 (4)	DAS 41 9-89	15-8-20	
647.7612 *647 7612* Breakaway Tip		Manufactured	No				Each	0.0000		4 (4)	DAS 41 9-89	15-8-20	
MS20470AD6-14 *MS20470AD6-14* Rivet		Purchased	No				Each	14.0000		8	DAS 41 9-89	15-8-20	

Location

ST309

Loc Qty

14

Loc Code

m130741

14

8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

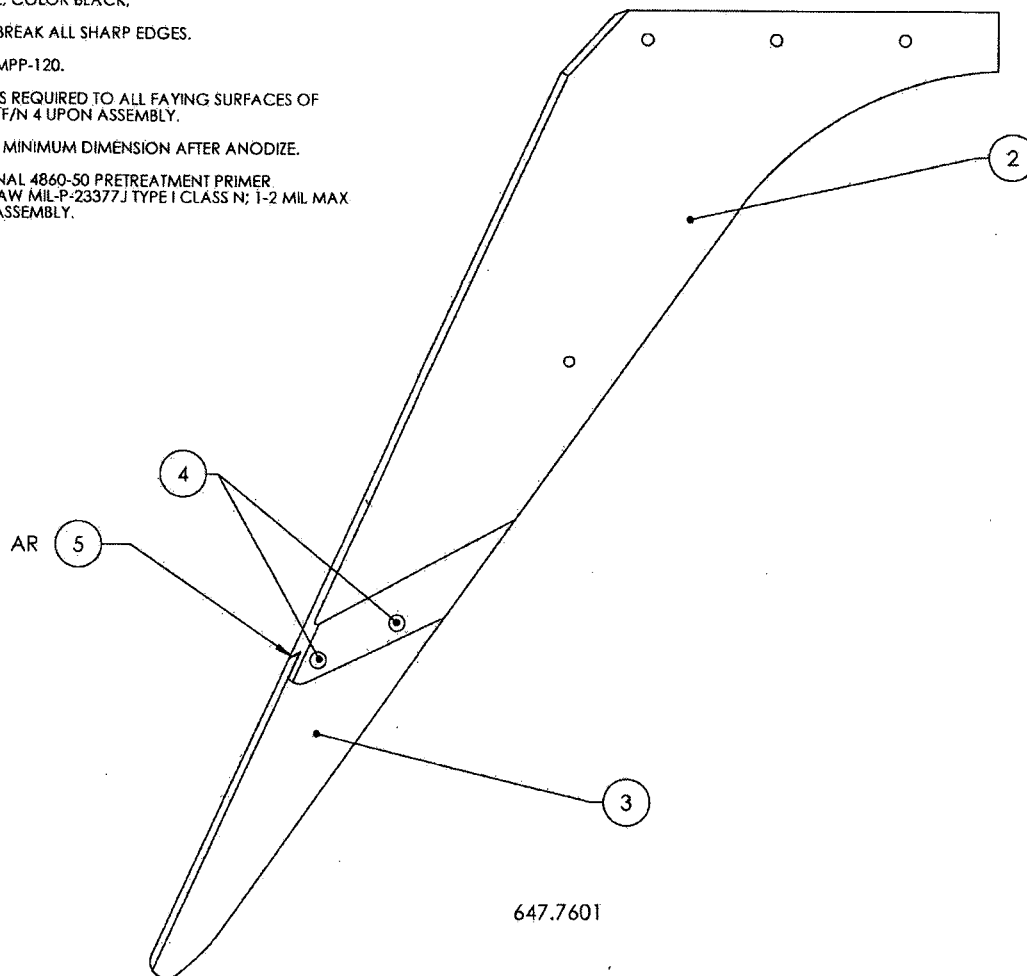
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
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OTHER : _____																					

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NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2, F/N 3 & F/N 4 UPON ASSEMBLY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER ANODIZE.
- 7 FINISH: CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX AFTER ASSEMBLY.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: PPS		N/C
2	INITIAL RELEASE	12/22/99	P. BRAYO

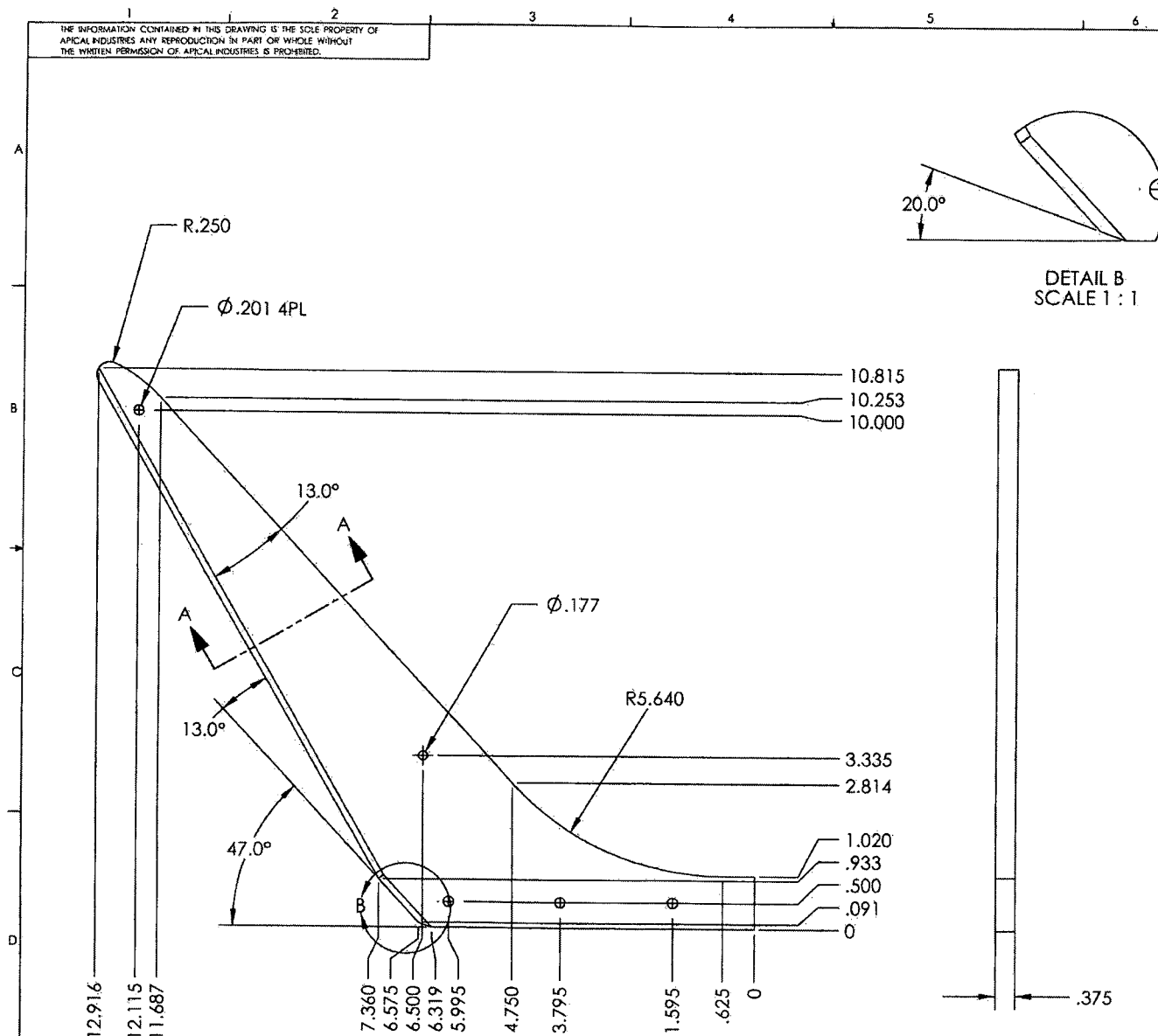
FOR COPY
RETURN TO
ENGINEERING
CONTROLLED CO.
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

135-202 MLS
150826

A/R	5	601.2045	RTV, LOCTITE 598		
2	4.	601.3122	RIVET	MS20470AD6-14	
1	3	647.7612	BREAKAWAY TIP	△	△
1	2	647.7611	LOWER DEFLECTOR	△	△
	1	647.7610	UPPER DEFLECTOR	△	△
7601	7601	647.7601	LOWER DEFLECTOR ASSY		△
QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
PARTS LIST					
ORIGINAL DATE 11/22/99 DRAWN BY A. QUAN CHECKED P. BRAYO DRAWING APPROVAL P. BRAYO 12/22/99 CONTRACTING UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ±.010 ANGLES ±.5°					
NEXT ASSY (S) 647.7400 647.7500 APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300					
DEFLECTORS					
SIZE CAGE CODE B 07ME6 SCALE NONE				DWG. NO. 647.7600	REV. N/C SHEET 1 OF 4

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REV.	DESCRIPTION	DATE	APPROVED



647.7610

SECTION A-A
SCALE 1 : 2

ORIGINAL DATE 11-25-20		APICAL INDUSTRIES	
DRAWN BY A. GUAN	CHECKED P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.02 3 PLACE DECIMALS ±.005 ANGLES ± .5°		REV. 8	

SCALE	CAGE CODE	DWG. NO.	REV.
NONE	07M26	647.7600	N/C
SHEET		2 OF 4	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

.078 X 45.0° TYP

SECTION C-C
SCALE 1:2

DETAIL D
SCALE 1:1

Ø.201

R5.782

.375

647.7611

TRUE R.100

.146
.042
0

R.250

DETAIL E
SCALE 1:1

TRUE R.100 2PL

.376^{+.002}
-.000

(.092 2PL)

.560

6 .374 MIN

ORIGINAL DATE
10/28/80
DRAWN BY
A. GUAN
CHECKED BY
P. BRAYO
DRAWING APPROVAL
DATE
10/28/80
CONTRACT NO.

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS .005
3 PLACE DECIMALS .000
ANGLES ± .5°

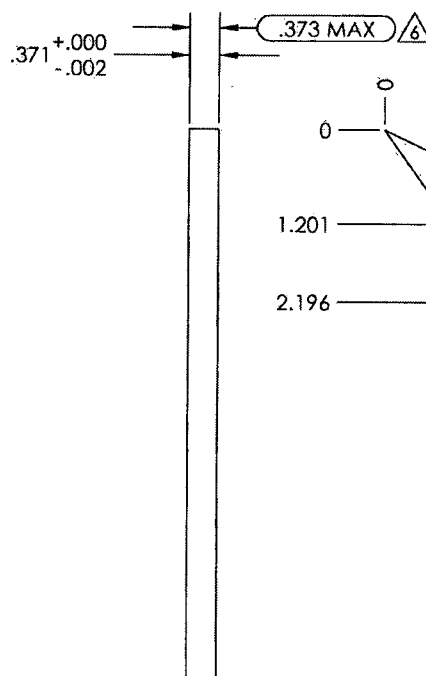
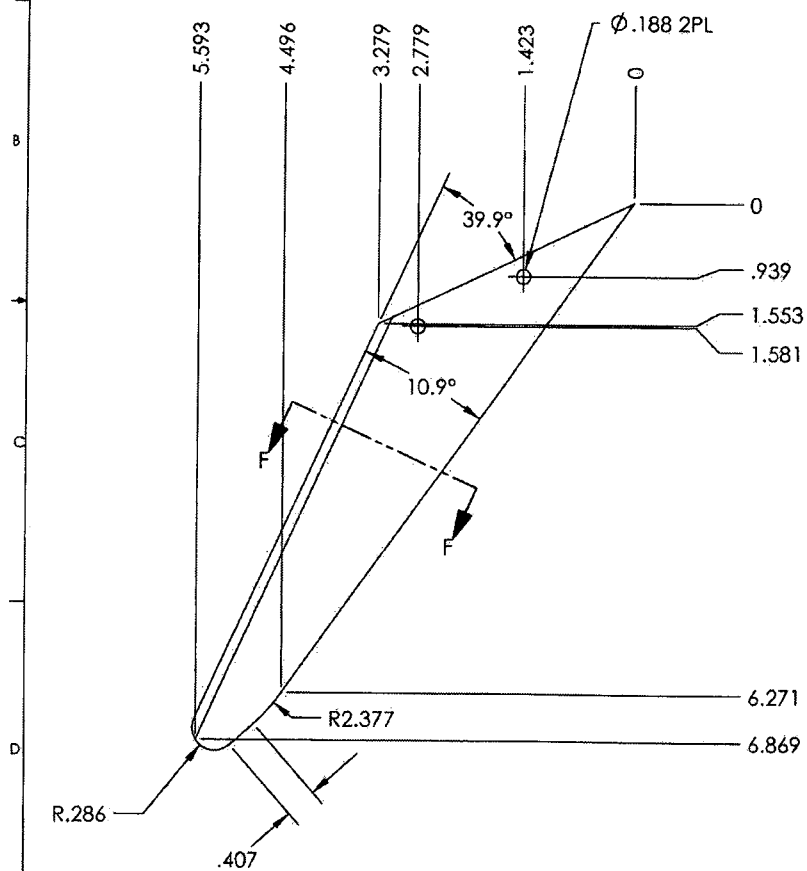
SHEET 3 OF 4
DWG NO. 647.7600
REV. N/C
SCALE NONE

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

.088 X 45.0°

SECTION F-F
SCALE 1:1.5



ORIGINAL DATE 12/28/87	APICAL INDUSTRIES				
DRAWN BY A. QUAN	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300				
CHECKED BY P. BRAYO					
DRAWING APPROVAL 12/22/87	DEFLECTORS				
CONTRACT NO.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .010 3 PLACE DECIMALS .005 ANGLES ± .5°	SIZE	CAGE CODE	DWG. NO.	647.7600	REV.
	B	07/M26	N/C		N/C
	SCALE NONE			SHEET	4 OF 4

Jean-Luc Menard

From: Jean-Luc Menard
Sent: August-20-15 11:40 AM
To: Pablo Bravo
Cc: Jean Francois Sauve
Subject: ECR D-15-02
Attachments: D-15-02.doc

Hi Pablo,
See attached ;
JL

From: Jean Francois Sauve
Sent: August-20-15 11:13 AM
To: Pablo Bravo <pbravo@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: Deviation to get approved

Perfect thanks!

JL, can you please open a ECR to revise the holes (A1/A2) on 647.9415.

Thanks

From: Pablo Bravo
Sent: August-20-15 10:45 AM
To: Jean Francois Sauve <jfsauve@dartaero.com>
Subject: Re: Deviation to get approved

JF,

I'm okay with the deviations that you are proposing below.
Regards,

Pablo

From: Jean Francois Sauve
Sent: Wednesday, August 19, 2015 12:02 PM
To: Pablo Bravo
Subject: Deviation to get approved

Hi Pablo,

Concerning 647.9402 Lower Deflector Long Assy., we're not able to insert the quick pin in 647.9415 since hole B1 (0.253") is currently at 0.248" (6 parts are affected). We will rework them but instead of stripping the primer to re-anodise the part, can we deviate from dwg. and do a touch-up with alodine for that hole?

Also, can we change the hole A1 to 0.193" on the dwg. Since the pivot point is in that hole, it will give less space for the part to move side way when pivoting the tip. This way, it will prevent from playing with the part up & down trying to align hole to insert the quick pin.

If you decide to do so, can you change hole A2 also for 0.193".

Please let me know if it works with you.

Thanks

JEAN-FRANÇOIS SAUVÉ
Production Engineering Coordinator

DART AEROSPACE
T 1 613 632-5200 > 237
F 1 613 632-524
1 800 556- 4166
www.dartaerospace.com

